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The present invention relates to the transmission of digital messages between a monitoring circuit integrated to the chip of a microprocessor and an analysis tool, for example, according to an architecture similar to that of Fig. 1. Monitoring circuit 18 is capable of transmitting to analysis tool 24 different messages when specific events occur on execution of a program by microprocessor 12. The coding of the digital message may correspond to the coding described in standard IEEE-ISTO-5001. For example, monitoring circuit 18 transmits to analysis tool 24 a message indicating the detection of a jump in the execution of the program by microprocessor 12. A jump can be imposed by a specific instruction of the program or be caused by elements of the circuit of microprocessor 12. A repetition of a the same instruction sequence of the program a number of times is, for example, obtained by a jump imposed by circuit elements of microprocessor 12. A jump may for example be systematically caused when microprocessor 12 receives an alert signal indicating a low charge level of the supply battery of circuit 10. Monitoring circuit 18 also transmits to the tool a message indicating the detection of a read or write operation on execution of the program by microprocessor 12. To determine the number of repetitions of a same message which should be provided by monitoring circuit 18 several times in a row, monitoring circuit 18 comprises a repetition counter initially set to 0 and associated with a specific message.

Please amend the next three paragraphs beginning on page 6, line 29 through page 7, line 30, as shown below:

The digital message transmission method consists comprises, when the same message should be transmitted by monitoring circuit 18 several times in a row on execution of the program by microprocessor 12, of transmitting the message only once, and of transmitting a message indicating the number of repetitions of the message.

At step 30, monitoring circuit 18 has detected a specific event on execution of the program stored in memory 14 by microprocessor 12 which normally leads to the transmission of a message by monitoring circuit 18 to analysis tool 24. Monitoring circuit 18 then memorizes stores specific data characteristic of the detected event. In particular, in the case where the detected event is a jump, memorized stored data correspond to an identifier of the detected jump type. Other memorized stored data correspond to the number of instructions executed by